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Claim 1 has been amended to recite "an operation of a predetermined type." With respect to claims 3, 4, 8, 37 and 38, claim 3 defines an operation as "interesting" if "it changes the state of the document."

Applicant respectfully requests the § 112, second paragraph rejections of claims 1, 3, 4, 8, 37 and 38 be withdrawn.

Claims 22 and 43 have been rejected because of informalities. As explained by the Examiner:

> "Claim 22 recites the limitation 'designate any arbitrary one' in line 7, page 26.
> The Applicant's usage of 'designate any arbitrary one' is not clear to the
> Examiner and cannot be determined in line 5, page 4 of the Specification.
> Claim 43 has a similar problem."

Claims 22 and 43 have been amended to eliminate "arbitrary."

Applicant respectfully requests the § 112, second paragraph rejections of claims 22 and 43 be withdrawn.

## II.    The § 103(a) Rejections

The Examiner rejected claims 1-18 and 37-42 under 35 U.S.C. § 103(a) over Nakajima (U.S. 5,659,747).

Claim 1 recites a method for performing operations on documents, including operations that change the state of the document. The method includes "automatically capturing the state of the document as it exists after [an operation of a predetermined type]", whenever such an operation has occurred, "and adding the captured state to the state history." Nakajima does not disclose or suggest maintaining a history of the states of a document as the states change when operations are performed on the document.

Nakajima provides a mechanism for performing multiple-level undo/redo operations in an application program and discloses a method that is responsive to user commands (col. 2, lines 38-40). The mechanism keeps a log of user commands and maintains a current position in the log to monitor a current state of the application program (col. 2, lines 40-42). The data held in the command log and functions for maintaining the data are encapsulated into a command log object (col. 3, lines 21-24). This command log object knows how to do, undo, and redo an operation (col. 3, lines 35-41). The conventional behavior of an undo command restores the

document to the state it had before the operation being undone was done. The restoration is accomplished not by restoring a previously saved state – as would be the case were Applicant's invention to be applied – but rather by performing an inverse operation on the document (col. 1, lines 34-36 and lines 46-49). The Nakajima method of multiple-level undo/redo operation is similarly taught in Gamma et. al., Design Patterns, Addison-Wesley Publishing Co., © 1995, pages 233 to 242, as discussed within Applicant's specification (line 18, page 1 – line 9, page 2). Because at least one element of Applicants' claimed invention, capturing document states, is not taught or suggested by the Nakajima patent, no prima facie case of obviousness under 35 U.S.C. § 103 has been established.

Claim 3 recites a method that includes performing a "step backward operation" or a "step forward operation" by installing as the current state of the document a state stored in the state history. Nakajima does not disclose a method of performing a redo or undo operation by installing as the current state of the document a state stored in the state history. Column 2, lines 15-20 and lines 29-35, and figures 6a and 8a within the Nakajima patent illustrate how the mechanism for implementing redo is based upon the command log object. Nakajima teaches performing a redo operation by executing the command immediately in front of the current cursor position within the log of user commands, thereby restoring the document to the state it had previously (col. 5, lines 25-39 and col. 6, lines 2-12). As discussed above, this method of multiple-level undo/redo operation is similarly taught in Gamma et. al., Design Patterns, Addison-Wesley Publishing Co., © 1995, pages 233 to 242. Accordingly, claim 3 is allowable over Nakajima.

Claim 8 discloses a method of enabling a user to undo revisions made to a document by maintaining a first history of interesting operations and a second history of all operations requested by the user, the second history but not the first history including operations global to the state of the application. Nakajima does not disclose a method of maintaining a first history of interesting operations and a second history of operations global to the state of the application. In column 1, lines 29-34 and lines 39-48, the Nakajima patent teaches the method of maintaining a single log or history of user commands to perform a single undo/redo operation, multiple successive undo/redo operations or complete undo/redo operations (abstract, see also col. 1, lines 31-32, lines 36-38, lines 43-45). Nakajima neither teaches nor suggests making any distinction

as to how different kinds of operations are handled, let alone the distinction recited in claim 8. Therefore, applicant submits that claim 8 is allowable over Nakajima.

Claim 18 discloses a method that includes enabling the user to discard any user-selected set of the document states in the history. In non-linear history mode, deleting an item from the history list does not cause the items below the deleted item to be deleted. See Applicant's specification, page 11, lines 29-30, through page 12, line 1. Because the later document states are complete in themselves, earlier ones may be deleted with no adverse affect (specification, page 12, lines 1-3). The claimed invention thus provides a way to implement multiple undo efficiently while avoiding operation sequence dependencies (specification, page 4, lines 14-16). Nakajima does not permit a user to discard any previous user command.

Nakajima maintains a list of multiple user commands in memory in a sequence ranging from a selected user command that has been executed to a most recently executed user command (col. 1, lines 43-54). If it were possible to remove a command from this sequential list, the effect of commands coming later in the editing sequence would become unpredictable, making it prudent not to delete those commands. Thus removing a command from within a sequence would have an adverse effect on the current document state. If a proposed modification would render the prior art unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. In re Gordon, 733 F.2d 900 (Fed. Cir. 1984). For at least this reason, claim 18 is allowable.

Claim 37 is a computer program product claim corresponding to claim 1. Claim 37 is allowable for at least the reasons set forth above in connection with claim 1.

The Examiner rejected claims 19-21 under 35 U.S.C. § 103(a) over Nakajima in view of Bristor (U.S. 6,018,342).

Claims 19-21 depend from claim 18 and are allowable for at least that reason.

The Examiner rejected claims 22-25, 43 and 44 under 35 U.S.C. § 103(a) over Nakajima.

Claim 22 recites a method of enabling a user to control operation of a computer program application for creating and modifying a document. The method includes identifying for the user on a display device a set of states that the document has been in by operation of the application; enabling the user to designate any one of the identified states; and providing the user an editing tool having the designated state as a document state operand. Claim 22 is allowable over

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Nakajima for the reasons discussed above for claims 1 and 18. However, in view of the Krause reference, Applicant is amending claim 22 to incorporate the limitation of claim 26, which has been canceled for that reason. For at least these reasons, claim 22 is allowable.

Claims 23-25 incorporate the features of claim 22 and are allowable for at least the same reasons.

Claim 43 is a computer program product claim corresponding to claim 1 and is allowable for at least the same reasons that apply to claim 1. Claim 44 incorporates the features of claim 22 and is allowable for at least that reason.

The Examiner rejected claims 26-36 under 35 U.S.C. § 103(a) over Nakajima in view of Matheny (U.S. 5,583,982).

Applicant has canceled claim 26. Claims 27-36 depend from claim 22 and are allowable over Nakajima for the same reasons discussed above for claim 22.

Matheny does not provide the user an editing tool having the designated state as a document state operand as required by claim 22. An example of such a tool is the history paintbrush tool described in the specification on page 4, lines 28-30, through page 5, lines 1-2. Matheny provides generic commands for Cut, Copy, Paste, Starting HyperMedia Links, Pulling Data on Links, as well as other user interface commands (col. 5, lines 30-33). In column 13, lines 7-33, Matheny teaches a standard editing protocol. The Matheny standard editing protocol supports standard editing commands such as Cut, Copy, Paste, Push Data, etc. (col. 13, lines 8-13). Nakajima in combination with Matheny does not teach or suggest providing the user the editing method recited in claim 22. For at least these reasons, claim 22 is allowable. Claims 27-36 incorporate the features of claim 22 and are allowable for at least the same reasons set forth above in connection with claim 22.
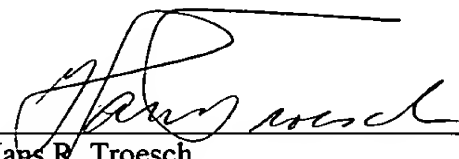
## III.    Conclusions

Applicant submits that all of the claims are now in condition for allowance, which action is requested.  Please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

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